

Title (en)

Method of generating a public key in a secure digital communication system and implicit certificate

Title (de)

Verfahren zur Erzeugung eines öffentlichen Schlüssels in einem sicheren digitalen Kommunikationssystem und implizites Zertifikat

Title (fr)

Procédé de generation d'une clé publique dans un système de communication numérique et certificat implicite

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Application

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Abstract (en)

[origin: WO9949612A1] A method of generating a public key in a secure digital communication system, having at least one trusted entity CA and subscriber entities A, the method comprising the steps of for each entity A, the CA selecting a unique identity IA distinguishing the entity A; generating a public key reconstruction public data gamma A of entity A by mathematically combining a generator of the trusted party CA with a private value of the entity A, such that the pair (IA, gamma A) serves as A's implicit certificate; combining the implicit certificate information (IA, gamma A) in accordance with a mathematical function F(gamma A, IA) to derive an entity information f; generating a private key (a) of the entity A by signing the entity information f and transmitting the private key (a) to the entity A, whereby the entity A's public key may be reconstructed from the public information, the generator gamma A and the identity IA relatively efficiently. A further aspect of the invention provides for a public key certificate including a plurality of public keys, and wherein at least one of the public keys is an implicitly certified public key.

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